AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A porous film with chemical resistance, comprising a film base, a multiplicity of communicating micropores having an average pore size of 0.01 μm or more and 5 μm or less , and a chemical-resistant polymeric compound which coats the film base, wherein:

the film base and the multiplicity of communicating micropores are produced by a phase conversion method in which mixtures containing polymers are cast as films and then introduced to solidifying liquids;

an average rate of open pores inside the porous film (porosity) is 30% to 80%;

an amount of the coat of the chemical-resistant polymeric compound is 0.01 to 50 percent by weight relative to the porous film;

the coat of the chemical-resistant polymeric compound ~~coating the film base is not porous~~ forms a thin solid layer over cell wall surfaces throughout the porous structure of the film base and is formed by subjecting a solution of the chemical-resistant polymeric compound or a precursor thereof dissolved in a solvent which can dissolve the polymeric compound or a precursor thereof to a coat forming procedure, with or without further subjecting the coat formed to treatment with at least one selected from the group consisting of heat, ultraviolet rays, visible radiations, electron beams, and radioactive rays; and

the porous film maintains the properties of the film base .

2. (Previously Presented) The porous film of claim 1, wherein the chemical-resistant polymeric compound is at least one selected from the group consisting of phenolic resins, urea resins, melamine resins, benzoguanamine resins, polyimide resins, epoxy resins, benzoxazine resins, polyurethane resins, alkyd resins, phthalic resins, maleic resins, silicone resins, triazine resins, furan resins, polyester resins, xylene resins, poly(vinyl alcohol)s, ethylene/vinyl alcohol copolymers, chitins, and chitosans.

3. (Original) The porous film of claim 1 or 2, wherein the porous film has a thickness of 5 to 200 μm.

4. (Cancelled)

5. (Withdrawn) A method for producing the porous film of claim 1, comprising the steps of immersing a porous film base in a solution of a chemical-resistant polymeric compound, the porous film base comprising a multiplicity of communicating micropores having an average pore size of more than 0.01 and less than 5 μm, or spraying or applying the solution to the porous film base; and drying the resulting article to cover the porous film base with the chemical-resistant polymeric compound, without immersing the porous film base in a non-solvent of the chemical-resistant polymeric compound or a precursor thereof, and without immersing the porous film base in a solution containing a non-solvent of the chemical-resistant polymeric compound or a precursor thereof, to thereby yield the porous film.

6. (Withdrawn) A method for producing the porous film of claim 1, comprising the steps of immersing a porous film base in a solution of a precursor of a chemical-resistant polymeric compound, the porous film base comprising a multiplicity of communicating micropores having an average pore size of 0.01 to 10 μm, or spraying or applying the solution to the porous film base; drying the resulting article; and subjecting the dried article to treatment with at least one selected from the group consisting of heat, ultraviolet rays, visible radiations, electron beams, and radioactive rays to cover the porous film base with the chemical-resistant polymeric compound to thereby yield the porous film.

7. (Currently Amended) A porous film with chemical resistance, comprising a film base, a multiplicity of communicating micropores having an average pore size of 0.01 μm or more and 5 μm or less, and a chemical-resistant polymeric compound which coats the film base, wherein:

the film base and the multiplicity of communicating micropores are produced by a phase conversion method in which mixtures containing polymers are cast as films and then introduced to solidifying liquids;

the pure-water permeation rate of the porous film is 3.3×10^{-9} to 1.1×10^{-7} $m.sec^{-1}.Pa^{-1}$;

an average rate of open pores inside the porous film (porosity) is 30% to 80%;

an amount of the coat of the chemical-resistant polymeric compound is 0.01 to 50 percent by weight relative to the porous film;

the coat of the chemical-resistant polymeric compound ~~coating the film base is not porous~~ forms a thin solid layer over cell wall surfaces throughout the porous structure of the film

base and is formed by subjecting a solution of the chemical-resistant polymeric compound or a precursor thereof dissolved in a solvent which can dissolve the polymeric compound or a precursor thereof to a coat forming procedure, with or without further subjecting the coat formed to treatment with at least one selected from the group consisting of heat, ultraviolet rays, visible radiations, electron beams, and radioactive rays; and

the porous film maintains the properties of the film base.

8. (Previously Presented) The porous film of claim 1 or 7, wherein the solution of the polymeric compound or a precursor thereof comprises between 0.1 percent by weight or more and 1 percent by weight or less of the polymeric compound or a precursor thereof.

9. (Previously Presented) The porous film of claim 1 or 7, wherein the porous film with chemical resistance is produced by immersing a film base in a solution of a precursor of a chemical-resistant polymeric compound, the film base comprising a multiplicity of communicating micropores having an average pore size of 0.01μm or more and less than 5μm, or spraying or applying the solution to the film base; drying the resulting article; and subjecting the dried article to treatment with at least one selected from the group consisting of heat, ultraviolet rays, visible radiations, electron beams, and radioactive rays to cover the porous film base with the chemical-resistant polymeric compound.

10. (Previously Presented) The porous film of claim 7, wherein the chemical-resistant polymeric compound is at least one selected from the group consisting of phenolic resins, urea

resins, melamine resins, benzoguanamine resins, polyimide resins, epoxy resins, benzoxazine resins, polyurethane resins, alkyd resins, phthalic resins, maleic resins, silicone resins, triazine resins, furan resins, polyester resins, xylene resins, poly(vinyl alcohol)s, ethylene/vinyl alcohol copolymers, chitins, and chitosans.

11. (New) A porous film comprising a film base and a coat of a chemical-resistant polymeric compound,

the film base produced by a phase conversion method in which mixtures containing polymers are cast as films and then introduced to solidifying liquids,

the coat of the chemical-resistant polymeric compound forming a thin solid layer over cell wall surfaces throughout the porous structure of the film base, and formed by subjecting a solution of a chemical-resistant polymeric compound or a precursor thereof dissolved in a solvent which can dissolve the polymeric compound or a precursor thereof to a coat forming procedure, with or without further subjecting the coat formed to treatment with at least one selected from the group consisting of heat, ultraviolet rays, visible radiations, electron beams, and radioactive rays,

wherein:

the porous film includes a multiplicity of communicating micropores having an average pore size of 0.01μm or more and 5μm or less;

an average rate of open pores inside the porous film (porosity) is 30% to 80%;

the porous film maintains the properties of the film base;

the film base comprises at least one selected from the group consisting of amide-imide polymers, imide polymers, polyethersulfones, polysulfones, acrylic polymers, and cellulose acetates;

the coat of the chemical-resistant polymeric compound comprises at least one selected from the group consisting of phenolic resins, urea resins, melamine resins, benzoguanamine resins, polyimide resins, epoxy resins, benzoxazine resins, polypropylene resins, polyurethane resins, fluororesins, alkyd resins, cellulose acetate resins, phthalic resins, maleic resins, silicone resins, triazine resins, furan resins, polyester resins, xylene resins, poly(vinyl alcohol)s, ethylene/vinyl alcohol copolymers, chitins, and chitosans; and

an amount of the coat of the chemical-resistant polymeric compound is 0.01 to 50 percent by weight relative to the porous film.

12. (New) The porous film of claim 11, wherein the film base comprises amide-imide polymers or imide polymers, and the coat of the chemical-resistant polymeric compound comprises at least one selected from the group consisting of phenolic resins, epoxy resins, fluororesins, and ethylene/vinyl alcohol copolymers.